

1) A body brace comprising:

- a back shell sized and shaped to be fitted about a person's back,
- a front shell sized and shaped to be fitted about the person's front torso region,
- at least one fastening element for connecting the back shell to the front shell,
- at least a first pressure plate, connected to either the back shell or the front shell via at least a first adjustable hinge element, for applying pressure to a selected portion of either the back or the front torso region of the person,
- wherein the adjustable hinge element has at least first and second connection regions, the first connection region being connected to a portion of the first pressure plate, the second connection region being connected to a portion of one of the back or front shells,
- the adjustable hinge element connecting the first pressure plate to one of the back or front shells at a selected angle and at a selected longitudinal displacement therefrom.

2. The body brace of claim 1 wherein the first hinge element has a selectable maximum opening angle.

3. The body brace of claim 1 wherein the first hinge element has a selected effective length.

4. The body brace of claim 1 wherein the at least one fastening element includes a strap for connecting the back and front shells with a selected tension about the person.

5. The body brace of claim 4 wherein the at least one fastening element comprises a strap of hook and loop pile fasteners and a buckle.

6. The body brace of claim 1 wherein the at least first pressure plate is an upper front pressure plate connected via at least one of the adjustable hinge elements to an upper portion of the front shell at a selected angle, and with a selected longitudinal displacement, so as to contact the person's upper front torso region.

7. The body brace of claim 1 wherein the at least first pressure plate is a upper back pressure plate connected via at least one of the adjustable hinge elements to an upper portion of the back shell at a selected angle, and with a selected longitudinal displacement, so as to contact the person's thoracic region.

8. The body brace of claim 6 wherein the selected angle defines an angle of kyphosis.

9. The body brace of claim 1 wherein the first adjustable hinge element comprises:

first and second hinge plates;

a pivot for pivotally connecting the first and second hinge plates, the pivot defining a pivot point;

a first contact surface associated with the first hinge plate,

a second contact surface associated with the second hinge plate, for contacting the first contact surface when the hinge is opened to a selected angle, thereby defining a maximum opening angle of the hinge element;

the second contact surface being defined by an adjustable element associated with the second hinge plate.

10. The body brace of claim 9 wherein:

the first hinge plate has a raised portion adjacent the pivot, the raised portion defining the first contact surface,

the second hinge plate has a raised portion adjacent the pivot, and

the adjustable element is a first setscrew positioned in the raised portion of the second hinge plate, the position of the setscrew being adjustable to selectively move the second contact surface and thereby define a maximum opening angle of the hinge element.

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11. The body brace of claim 10 wherein:

the second contact surface is an end surface of the first setscrew.

12. ~~The body brace of claim 11 wherein the hinge element further comprises:~~

a locking element for locking the position of the first setscrew.

13. The body brace of claim 12 wherein the locking element is a second setscrew positioned in the raised portion of the second hinge plate so as to make contact with and lock the position of the first setscrew.

14. The body brace of claim 13 wherein:

the first hinge plate has a major axis;

~~the second hinge plate has a major axis;~~

the first hinge plate has at least two spaced-apart connection regions disposed along the major axis of the first hinge plate at different, selected longitudinal displacements from the pivot point, for connecting to the first pressure plate with a selected longitudinal displacement from the pivot point;

the second hinge plate has at least two spaced-apart connection regions disposed along the major axis of the second hinge plate at different, selected longitudinal displacements from the pivot point, for connecting to a portion of either the back or front shells with a selected longitudinal displacement from the pivot point.

~~15. The body brace of claim 14 wherein the spaced-apart connection regions comprise fastener-receiving regions for receiving a fastener.~~

16. The body brace of claim 15 wherein the fastener-receiving regions are holes.

17. The body brace of claim 16 wherein the holes are adapted to receive a rivet.

18. The body brace of claim 16 wherein the holes are adapted to receive a screw.

19. The body brace of claim 18 wherein the portion of the either back or front shells connected to the second connection region of the adjustable hinge element has a plurality of spaced-apart holes having a spacing corresponding to that of the holes disposed in the corresponding hinge plate, thereby defining a plurality of hinge-connecting regions on either of the back or front shells.

20. The body brace of claim 19 wherein the portion of the first pressure plate connected to the first connection region of the adjustable hinge element has a plurality of spaced-apart holes having a spacing corresponding to that of the

holes disposed in the corresponding hinge plate, thereby defining a plurality of hinge-connecting regions on the first pressure plate.

21. A hinge for connecting a first element to a second element with a selected angle and selected longitudinal displacement from a pivot point, the hinge comprising:

first and second hinge plates for connecting to the first and second elements, respectively at selected connection regions thereof;

anything

a pivot for pivotally connecting the first and second hinge plates, the pivot defining a pivot point;

a first contact surface associated with the first hinge plate,

a second contact surface associated with the second hinge plate, for contacting the first contact surface when the hinge is opened to a selected angle, thereby defining a maximum opening angle of the hinge element;

the second contact surface being defined by an adjustable element associated with the second hinge plate.

22. The hinge of claim 21 wherein:

the first hinge plate has a raised portion adjacent the pivot, the raised portion defining the first contact surface,

the second hinge plate has a raised portion adjacent the pivot, and

the adjustable element is a first setscrew positioned in the raised portion of the second hinge plate, the position of the setscrew being adjustable to

longitudinal displacements from the pivot point, for connecting to a portion of a second element with a selected longitudinal displacement from the pivot point.

27. The hinge of claim 26 wherein the spaced-apart connection regions comprise fastener-receiving regions for receiving a fastener.

28. The hinge of claim 27 wherein the fastener-receiving regions are formed by holes.

29. The hinge of claim 28 wherein the holes are adapted to receive a fastener.

30. The hinge of claim 28 wherein the holes are adapted to receive a fastener.

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